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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,865	08/06/2003	Andrew David Carlson	X-11408C	8787

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EXAMINER	
KOSSON, ROSANNE	
ART UNIT	**PAPER NUMBER**
1651	

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/635,865	CARLSON ET AL.	
	Examiner	Art Unit	
	Rosanne Kosson	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/6/03, 12/22/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The preliminary amendment filed on August 6, 2003 has been received and entered. Claims 1-12 have been canceled, and claims 13-17 have been added.

Accordingly, claims 13-17 are examined on the merits herewith.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 13-15 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of treating a patient have a disease state selected from the group consisting of: thrombotic stroke, deep vein thrombosis, pulmonary embolism, peripheral arterial thrombosis, emboli originating from the heart or peripheral arteries, acute myocardial infarction, disseminated intravascular coagulation, and acute pre- or postcapillary occlusions (the disease recited in claim 16), does not reasonably provide enablement for a method of treating a patient having any disease involving intravascular coagulation. In particular, claim 13 reads on treating a patient having a blood clotting disease in which sufficient blood clots are unable to form, such as hemophilia, thrombocytopenia or a clotting disorder caused by a deficiency of Von Willebrand Factor receptors (Bernard-Soulier syndrome). Because activated protein C (aPC) is an anticoagulant, one of skill in the art would

recognize that one should avoid practicing the claimed method on a patient having a blood clotting disorder. Thus, the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. A holding of non-enablement is therefore required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirahara (US 5,084,273) in view of Mochida Pharmaceutical Co. Ltd. (JP 08-301786, see enclosed English machine translation). Hirahara discloses that activated protein C

(aPC) may be administered to patients as an anticoagulant to treat intrinsic and extrinsic blood coagulation. Extrinsic blood coagulation is that caused by extravascular tissue factors and phospholipids (see col. 1, lines 9-12, and col. 2, lines 13-15). Thus, aPC may be used to treat blood clots, including blood clots caused by myocardial infarction, transplants or retinal disease. aPC may be formulated as a lyophilized preparation containing a sugar, such as mannitol or sucrose. The lyophilized formulation contains about 1.5 mg of aPC to about 100 mg of mannitol. But Hirahara also discloses that more aPC may be used in the formulation. The total amount of protein in the active ingredient may range from 5 mg to 1 g for an adult of 60 kg (see col. 3, lines 14-36, and col. 4, lines 38-43). Hirahara does not disclose treating blood clots with a specific formulation in which the ratio of aPC to sugar by weight is about 1:5-7.

Mochida discloses lyophilized pharmaceutical preparations of aPC containing 10 mg of aPC and 25 mg of mannitol (see paragraph 20). In the composition of Mochida, the ratio by weight of aPC:mannitol is 1:2.5, while in the composition of Hirahara, the ratio is about 1:67 to 10:1 if 1 g of aPC is used. Thus, in the compositions of Hirahara, the ratio can vary widely.

The manipulation of this ratio is a result-effective parameter which was, at the time of Applicant's invention, routinely optimized by one of ordinary skill in the art of pharmaceutical preparations, as evidenced by the fact that Hirahara provides a wide range of suitable concentrations of aPC in the therapeutic compositions disclosed therein. Thus, the claimed variation in Applicant's method with respect to this parameter clearly would have been obvious at the time of Applicant's invention, the

determination of a suitable ratio of active ingredient to bulking agent through routine experimentation being well within the capabilities of the artisan of ordinary skill at the time of Applicant's invention. Therefore, a holding of obviousness is required.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosanne Kosson whose telephone number is 571-272-2923. The examiner can normally be reached on Monday-Friday, 8:30-6:00, with alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rosanne Kosson
Examiner
Art Unit 1651

rk/2005-01-19

FRANCISCO PRATS
PRIMARY EXAMINER